

SEPARATION OF CHARGED SUBSTANCE

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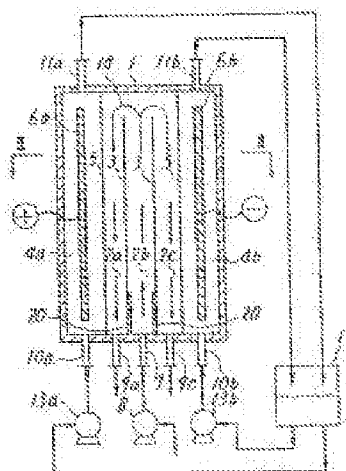
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Abstract of JP 63196845 (A)

PURPOSE: To achieve a higher concn. and a higher recovery of a separation liquid, by setting a plurality of electrophoretic units with a higher separation efficiency of a charged substance.

CONSTITUTION: A migration main unit 1 is provided with electrode chambers 4a and 4b divided with semi-permeable membranes 5 and electrode plates 6a and 6b are arranged in the chambers. A migration chamber is formed between the membranes 5 and divided with filter membranes 3 into three chambers. The central chamber 2b thereof is provided with an inlet nozzle 7 to supply a liquid to be treated containing a charged substance to be separated, and three migration chambers 2a and 2c with outlet nozzles 9a and 9c to extract the charged substance separated, then the charged substance is separated into the migration chambers 2a and 2c while the liquid being treated is fluidized in the same direction as that of convection caused by Joule heat generated in the migration chambers. Several sets of electrophoretic units thus arranged are provided and the separation liquid extracted from the outlet nozzles of the upstream side unit is supplied sequentially to the inlet nozzle of the downstream unit. The separation liquid concentrated is taken out of the output nozzles of the downstream unit while a part thereof is returned to the inlet nozzle of the upstream unit, thereby achieving a higher density and a higher recovery.



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